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U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

**APPEAL BRIEF TRANSMITTAL &
REQUEST FOR EXTENSION OF TIME**

Docket Number:
10191/3326

Conf. No.
1824

Application Number
10/733,428

Filing Date
December 11, 2003

Examiner
Javaid H. NASRI

Art Unit
2839

Invention Title
**PLUG-CONNECTION VERIFICATION
FOR DETECTING A PROPERLY MADE
ELECTRICAL PLUG CONNECTION**

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Date: January 27, 2006

Reg. No. 36,197

Signature: _____

[Signature]
Jong H. Lee

Further to the Notice of Appeal dated October 24, 2005 (filed at the PTO on October 27, 2006) for the above-referenced application, enclosed are three copies of an Appeal Brief. Accompanying the Appeal Brief is the Appendix to the Appeal Brief.

Applicant hereby requests a **two-month extension of time** in which to file the Appeal Brief. The extended period expires on January 26, 2006. The Commissioner is hereby authorized to charge payment of **\$450** extension fee, as well as the appeal brief filing fee of **\$500.00**, and any additional fees deemed necessary in connection with this communication, to the deposit account of **Kenyon & Kenyon**, deposit account number **11-0600**.

[Signature] (P. No. 36,197)

Dated: January 27, 2006

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[10191/3326]

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES**

Applicant : Andreas SIMMEL
Application. No. : 10/733,428
Filed : December 11, 2003
For : PLUG-CONNECTION VERIFICATION FOR DETECTING
A PROPERLY MADE ELECTRICAL PLUG CONNECTION

Art Unit : 2839
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01/31/2006 BABRAHA1 00000043 110600 10733428

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APPELLANT'S APPEAL BRIEF
UNDER 37 C.F.R. § 41.37

S I R :

Applicant filed a Notice of Appeal dated October 24, 2005 (filed at the PTO on October 27, 2005), appealing from the Final Office Action dated July 5, 2005, in which claims 1-3, 5 and 7 of the above-identified application were finally rejected. This Brief is submitted by Applicant in support of his appeal.

I. REAL PARTY IN INTEREST

The real party in interest in the present appeal is Robert Bosch GmbH of Stuttgart, Germany. Robert Bosch GmbH is the assignee of the entire right, title, and interest in the present application.

II. RELATED APPEALS AND INTERFERENCES

No appeal or interference which will directly affect, or be directly affected by, or have a bearing on, the Board's decision in the pending appeal is known to exist to the undersigned attorney or is believed by the undersigned attorney to be known to exist to Applicant.

III. STATUS OF CLAIMS

Claims 1-3, 5 and 7 are pending in this application and are being appealed. Claims 4 and 6 have been canceled. Amongst the pending claims, claim 1 is independent, and claims 2-3, 5 and 7 are ultimately dependent on claim 1.

IV. STATUS OF AMENDMENTS

No amendment has been submitted subsequent to the final Office Action mailed on July 5, 2005.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

The present invention provides a plug-connection verification for detecting a properly made electrical plug connection between a plug having a locking element and a socket, which verification is provided in such a manner that the state of the plug connection is transmitted to a stationary or mobile receiver element by data transmission so that the operator has the possibility of verifying the plug connection with the aid of this receiver element, without requiring the plug connection to be accessible to view. (Specification, p. 1, l. 3-6; p. 2, l. 10-14 & 18-23).

Figure 1 shows a plug connection verification 1 for detecting a properly made electrical plug connection 2, which plug connection is composed of a socket 3 and a plug 4. (P. 5, l. 5-8). Arranged on plug 4 is a locking element 5 which, when in the locked position, grips behind a nose 6 arranged on the side of socket 3, thus ensuring a vibration-proof plug connection. (P. 5, l. 8-11).

When the plug connection is in the plugged state, then analyzer device 7 (which is formed on a microchip for fixed connection to the plug 4) detects the state of plug connection 1 and triggers a signal which is transmitted to a data transmission device 8, e.g., a transponder. (P. 5, l. 13-16).

In the example embodiment shown in Fig. 1, the data transmission device sends an acknowledgment of the properly executed plugging operation to a further receiver element 9, along with an identification of the plug connection; this receiver element 9 may be arranged on a wrist 10 of the operator. (P. 5, l. 18-23). Based on the state indicated on receiver element 9, the operator can see the quality of the plug connection immediately upon completion of the plugging operation; if the operator is not able to recognize or interpret the signal, then this acknowledgment is forwarded 11 to a central control unit 12 along with the identification of the plug connection. (P. 5, l. 23-29). This central control unit 12, in turn, manages the corresponding plug connections and outputs the error messages at arbitrary points of the work process to make a correction. (P. 5, l. 29-32).

Figures 2A and 2B illustrate the principle of analysis of the plug connection according to the present invention. Figure 2B shows the plug connection while in the unplugged state, in which position the locking element 5 operates a switch 13 which is designed as part of analyzer unit 7. (P. 5, l. 34 – p. 6, l. 3). By moving the plug in the direction of arrow 14, the locking element opens and releases switch 13 as shown in Figure 2A; subsequently, the signaling process already described in Figure 1 takes place to transmit the corresponding signal to the operator. (P. 6, l. 3-7).

Figure 3 depicts an alternative embodiment of the analyzer unit, designated in Fig. 3 by the reference numeral 7', which includes a light-emitting diode 15, which in turn is covered in the non-locked state. (P. 6, l. 9-11). As soon as the plug connection is made, an opening 16 is cleared and a photovoltaic cell 17 (not specifically shown in Figure 3) is exposed to light. (P. 6, l. 11-14). This photovoltaic cell 17, in turn, emits a corresponding signal to data transmission device 8, thus indicating that the electrical plug connection has been completed. (P. 6, l. 14-17).

VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

The following ground of rejection is presented for review on appeal in this case:

(A) Whether claims 1-3, 5 and 7 are unpatentable under 35 U.S.C. § 103(a) over U.S. Patent No. 5,120,255 to Kouda et al. ("Kouda") in view of U.S. Patent 5,686,897 to Loh ("Loh").

VII. ARGUMENTS

A. REJECTION OF CLAIMS 1-3, 5 AND 7 UNDER 35 U.S.C. § 103(a)

Claims 1-3, 5 and 7 are pending in this application and stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,120,255 ("Kouda") in view of U.S. Patent No. 5,686,897 ("Loh"). Applicant respectfully requests reconsideration of the rejection in view of the following explanation.

In order for a claim to be rejected for obviousness under 35 U.S.C. § 103(a), not only must the prior art teach or suggest each element of the claim, the prior art must also suggest combining the elements in the manner contemplated by the claim. See Northern Telecom, Inc. v. Datapoint Corp., 908 F. 2d 931, 934 (Fed. Cir. 1990); In re Bond, 910 F. 2d 831, 834 (Fed. Cir. 1990). The Examiner bears the initial burden of establishing a prima facie case of obviousness. The Examiner must show, inter alia, that there is some suggestion or motivation, either in the references themselves or in the

knowledge generally available to one of ordinary skill in the art, to modify or combine the references, and that, when so modified or combined, the prior art teaches or suggests all of the claim limitations. See M.P.E.P. §2143. To the extent that the Examiner may be relying on the doctrine of inherent disclosure for the rejection, the Examiner must provide a “basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flow from the teachings of the applied art.” (See M.P.E.P. § 2112; emphasis in original; see also Ex parte Levy, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)).

Claim 1 recites, in relevant parts, that “the **detection device** is arranged on a **chip element that is fixedly connected** to the plug,” and that “a receiver unit . . . [is] configured to receive data from the data transmission device, wherein the receiver unit is configured to be attached to a wrist of an operator.” In support of the rejection, the Examiner contended in the final Office Action that “it would be inherent that the chip [of Kouda] be fixedly connected to the plug for simplification of manufacturing process” because Kouda “discloses a chip associated with the plug and socket elements (see col. 5, lines 31-44).” However, nothing in the cited section of Kouda mentions anything about a chip associated with the plug and socket elements, i.e., there is no suggestion that the male connector M or the female connector F is a chip element. Furthermore, even if Kouda did disclose a chip associated with the plug and socket elements, this disclosure would have nothing to do with the claimed feature, i.e., “the **detection device** is **arranged** on a **chip element that is fixedly connected** to the plug,” since the only thing even remotely close to being a “detection device” in Kouda is “mark reader G” shown in Fig. 4f of Kouda (and described in associated text of col. 5, l. 31-44), which “**mark reader G**” is at a clearance distance from the plug housing in order to pick up a signal.

In the “Response to Arguments” section of the Advisory Action, the Examiner contends that “the detection device (S) is arranged on a chip element (m) that is fixedly connected to the plug when the slider (S) is inside the plug (M),” and the Examiner simply notes that claims are given their “broadest

reasonable interpretation.” However, no matter how broad the “broadest reasonable interpretation” of the Applicant’s claimed feature may be, the Examiner’s assertion regarding the teachings of Kouda are completely contradicted by the actual disclosure of Kouda. Kouda clearly indicates the following: a) element S is the entire “locking detecting slider” (col. 3, l. 39-40); b) “locking detecting slider S consists of a slider body 23 . . . and a complete locking detecting finger 24” (col. 4, l. 7-9); and c) element m is **not a chip element**, but a “locking indicating mark . . . formed in the central area of the upper surface of the detecting finger 24” (col. 4, l. 18-20). Therefore, since Kouda clearly indicates that element m is a component mark arranged on a part of the slider S, there is simply no way that the element S of Kouda could possibly be arranged on element m, let alone arranged on a chip element, thereby directly contradicting the Examiner’s assertion that “the detection device (S) is arranged on a chip element (m).” In fact, there is no mention of a chip element in Kouda, let alone a chip associated with the plug and socket elements, so the disclosure of Kouda simply has nothing to do with the claimed feature that “the **detection device is arranged on a chip element that is fixedly connected** to the plug,” regardless whether the slider (S) is arranged insider the plug (M) or not.

Independent of the above, Applicant notes that the “broadest reasonable interpretation” of a claim is not made in vacuum; instead, the long-standing rule of claim interpretation is that the pending claims should be given the broadest reasonable interpretation **that is consistent with the specification and the interpretation that those skilled in the art would reach**. (See M.P.E.P. 2111, citing In re Hyatt, 211 F.3d 1367 (Fed. Cir. 2000), and In re Cortright, 165 F.3d 1353 (Fed. Cir. 1999)). When viewed in light of the Applicant’s disclosure, the only reasonable interpretation of the claimed feature of “a **chip element that is fixedly connected** to the plug” is that an **electronic chip** is attached to the plug. For example, p. 3, l. 9-13 of the Specification clearly indicates that the detection device is arranged on a microchip which is adhesively bonded or fixed to the plug-connector housing. Furthermore, given the claim recitation that the detection device includes a data

transmission device, one of ordinary skill in the art would readily conclude that the recited “chip element,” on which the detection device is arranged, is an electronic chip.

Accordingly, the detection device of Kouda is not **arranged** on anything, let alone a chip, since the Examiner’s asserted “detection device (S)” is clearly not arranged on element (m), let alone any chip element, and the only thing even remotely close to being a “detection device” in Kouda is the “mark reader G” shown in Fig. 4f, which is at a clearance distance from the plug housing in order to pick up a signal, i.e., the mark reader G is an independent mechanism for reading the mark m. For at least these reasons, Kouda does not teach or suggest that a **“detection device is arranged on a chip element that is fixedly connected to the plug,”** and the combination of the applied references fails to render claim 1 and its dependent claims 2, 3, 5 and 7 obvious.

Independent of the above, Applicant notes that the Examiner has contended in the “Response to Arguments” section of the Advisory Action that the Examiner is not relying on doctrine of inherent disclosure in support of the rejection. However, to the Extent the Examiner has clearly invoked the doctrine of inherent disclosure in the final Office Action, i.e., “it would be inherent that the chip [of Kouda] be fixedly connected to the plug for simplification of manufacturing process” because Kouda “discloses a chip associated with the plug and socket elements (see col. 5, lines 31-44),” the Examiner has clearly failed to provide any “basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flow from the teachings of the applied art,” which is required in order to rely on the doctrine of inherent disclosure. “The fact that certain result or characteristic *may occur* or be present in the prior art is not sufficient to establish the inherency of that result or characteristic.” (M.P.E.P. § 2112, citing In re Rijckaert, 9 F.3d 1531, 28 U.S.P.Q.2d 1955 (Fed. Cir. 1993)). Clearly, the applicable law is that it is insufficient to establish inherency *even if one could somehow show that the chip could be fixedly connected to the plug for simplification of manufacturing process*. There is simply no plausible reason that

any hypothetical “chip element” (which is not suggested in Kouda) *would necessarily have to be fixedly connected to the plug*, which is the requirement for establishing inherent disclosure. In any case, not only is there no suggestion of a chip associated with the plug and socket elements, or that the “*detection device is arranged on a chip element*,” but it is also clearly shown in Fig. 4f of Kouda (and described in associated text of col. 5, l. 31-44) that “mark reader G” is at a distance from the plug housing in order to pick up a signal. Clearly, there is no suggestion that the detection device (either “detection device S” as argued by the Examiner in the Advisory Action, or “mark reader G”) is “arranged on a chip element that is fixedly connected to the plug housing.”

For at least the foregoing reasons, the combination of the applied references fails to render claim 1 and its dependent claims 2, 3, 5 and 7 obvious.

Independent of the above, Applicant notes that Loh clearly fails to teach or suggest the claimed features that “a receiver unit . . . [is] configured to receive data from the data transmission device, wherein the receiver unit is configured to be attached to a wrist of an operator.” To the extent the Examiner cites column 5, line 37 ff. of Kouda (“an output means for recording and/or displaying the result”) as teaching the claimed feature of the receiver unit, Applicant notes that the above-cited section of Kouda describes *a component of the mark reader G*, and the mark reader G is clearly *not receiving any data from the data transmission device of the detection device* (since the detection device (S) has no *data transmission device*), which is directly contradictory to the claimed feature of “a receiver unit configured to receive data from the data transmission device.” More particularly, although the Examiner contends that Loh provides a motivation to modify the teachings of Kouda so as to attach the receiver unit to a wrist, this asserted modification doesn’t make any sense because Loh has nothing to do with a receiver.

For at least the foregoing reasons, the combination of the applied references fails to render claim 1 and its dependent claims 2, 3, 5 and 7


obvious. Applicant respectfully requests that the rejection of claims 1-3, 5 and 7 be reversed.

VIII. CONCLUSION

For the foregoing reasons, it is respectfully submitted that the final rejection of claims 1-3, 5 and 7 should be reversed.

Respectfully submitted,

KENYON & KENYON LLP

 (R. No. 36,197)

Dated: January 27, 2006

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[10191/3326]

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Jong H. Lee

APPENDIX TO APPELLANT'S APPEAL BRIEF
UNDER 37 C.F.R. § 41.37

I. CLAIMS APPENDIX

The claims involved in this appeal, claims 1-3, 5 and 7, in their
current form after entry of all amendments presented during the course of
prosecution, are set forth below:

1. A plug-connection verification system for detecting a properly made electrical
plug connection between a plug having a locking element and a socket,
comprising:

a detection device including an analyzer device and a data transmission
device, the analyzer unit being configured to detect a position of the locking
element and the data transmission device being configured to transmit the

determined position of the locking element, wherein the detection device is arranged on a chip element that is fixedly connected to the plug; and

a receiver unit configured to receive data from the data transmission device, wherein the receiver unit is configured to be attached to a wrist of an operator.

2. The plug-connection verification system as recited in claim 1, further comprising:

a switch arranged below the locking element.

3. The plug-connection verification system as recited in claim 1, wherein the locking element has an opening through which a light-emitting diode emits radiation onto a photovoltaic cell when the locking element is in a defined position.

5. The plug-connection verification system as recited in claim 1, wherein the detection device includes a transponder.

7. The plug-connection verification system as recited in claim 1, wherein: the receiver unit includes a memory for storing an indication of the determined position.

II. EVIDENCE APPENDIX

In the present application, there has been no evidence submitted pursuant to 37 C.F.R. §§ 1.130, 1.131 or 1.131, or other evidence entered by the Examiner and relied upon by Appellants in the present appeal.

III. RELATED PROCEEDINGS APPENDIX

No appeal or interference which will directly affect, or be directly affected by, or have a bearing on, the Board's decision in the pending appeal is known to exist.

Respectfully submitted,

KENYON & KENYON LLP

 (R. No. 36,197)

Dated: January 27, 2006

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